DAIKIN

INSTALLATION MANUAL

English
Deutsch
Français
Español
Italiano
Ελληνικά
Nederlands
Portugues
Русский

VRV SYSTEM Inverter Air Conditioners

MODELS
(Ceiling suspended Cassette type)

FXUQ71MV1	**FXUQ71MAV1**
FXUQ100MV1	**FXUQ100MAV1**
FXUQ125MV1	**FXUQ125MAV1**

READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION.
KEEP THIS MANUAL IN A HANDY PLACE FOR FUTURE REFERENCE.

LESEN SIE DIESE ANWEISUNGEN VOR DER INSTALLATION SORGFÄLTIG DURCH.
BEWAHREN SIE DIESE ANLEITUNG FÜR SPÄTERE BEZUGNAHME GRIFFBEREIT AUF.

LIRE SOIGNEUSEMENT CES INSTRUCTIONS AVANT L'INSTALLATION.
CONSERVER CE MANUEL A PORTEE DE MAIN POUR REFERENCE ULTERIEURE.

LEA CUIDADOSAMENTE ESTAS INSTRUCCIONES ANTES DE INSTALAR.
GUARDE ESTE MANUAL EN UN LUGAR A MANO PARA LEER EN CASO DE TENER ALGUNA DUDA.

PRIMA DELL'INSTALLAZIONE LEGGERE ATTENTAMENTE QUESTE ISTRUZIONI.
TENERE QUESTO MANUALE A PORTATA DI MANO PER RIFERIMENTI FUTURI.

ΔΙΑΒΑΣΤΕ ΠΡΟΣΕΚΤΙΚΑ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ ΠΡΙΝ ΑΠΟ ΤΗΝ ΕΓΚΑΤΑΣΤΑΣΗ ΕΧΕΤΕ ΑΥΤΟ ΤΟ ΕΓΧΕΙΡΙΔΙΟ ΕΥΚΑΙΡΟ ΓΙΑ ΝΑ ΤΟ ΣΥΜΒΟΥΛΕΥΕΣΤΕ ΣΤΟ ΜΕΛΛΟΝ.

LEES DEZE INSTRUCTIES ZORGVULDIG DOOR VOOR INSTALLATIE. BEWAAR DEZE HANDLEINDING WAAR U HEM KUNT TERUGVINDEN VOOR LATERE NASLAG.

LEIA COM ATENÇÃO ESTAS INSTRUÇÕES ANTES DE REALIZAR A INSTALAÇÃO.
MANTENHA ESTE MANUAL AO SEU ALCANCE PARA FUTURAS CONSULTAS.

ПЕРЕД НАЧАЛОМ МОНТАЖА ВНИМАТЕЛЬНО ОЗНАКОМЬТЕСЬ С ДАННЫМИ ИНСТРУКЦИЯМИ. СОХРАНИТЕ ДАННОЕ РУКОВОДСТВО В МЕСТЕ, УДОБНОМ ДЛЯ ОБРАЩЕНИЯ В БУДУЩЕМ.

CE - DECLARATION-OF-CONFORMITY
CE - KONFORMITÄTSERKLÄRUNG
CE - DECLARATION-DE-CONFORMITE
CE - CONFORMITEITSVERKLARING
CE - DECLARACION-DE-CONFORMIDAD
CE - DICHIARAZIONE-DI-CONFORMITA
CE - ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ
CE - DECLARAÇÃO-DE-CONFORMIDADE
CE - ЗАЯВЛЕНИЕ-О-СООТВЕТСТВИИ
CE - OPFYLDELSESERKLÆRING
CE - FÖRSÄKRAN-OM-ÖVERENSTÄMMELSE
CE - ERKLÆRING OM-SAMSVAR
CE - ILMOITUS-YHDENMUKAISUUDESTA
CE - PROHLÁŠENÍ-O-SHODĚ
CE - IZJAVA-O-USKLAĐENOSTI
CE - MEGFELELŐSÉGI-NYILATKOZAT
CE - DEKLARACJA-ZGODNOŚCI
CE - DECLARAŢIE-DE-CONFORMITATE
CE - IZJAVA O SKLADNOSTI
CE - VASTAVUSDEKLARATSIOON
CE - ДЕКЛАРАЦИЯ-ЗА-СЪОТВЕТСТВИЕ
CE - ATITIKTIES-DEKLARACIJA
CE - ATBILSTĪBAS-DEKLARĀCIJA
CE - VYHLÁSENIE-ZHODY
CE - UYUMLULUK-BİLDİRİSİ

DAIKIN INDUSTRIES, LTD.

01 (GB) declares under its sole responsibility that the air conditioning models to which this declaration relates:
02 (D) erklärt auf seine alleinige Verantwortung daß die Modelle der Klimageräte für die diese Erklärung bestimmt ist:
03 (F) déclare sous sa seule responsabilité que les appareils d'air conditionné visés par la présente déclaration:
04 (NL) verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft:
05 (E) declara baja su única responsabilidad que los modelos de aire acondicionado a los cuales hace referencia la declaración:
06 (I) dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:
07 (GR) δηλώνει με αποκλειστική της ευθύνη ότι τα μοντέλα των κλιματιστικών συσκευών στα οποία αναφέρεται η παρούσα δήλωση:
08 (P) declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere:
09 (RUS) заявляет, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление:
10 (DK) erklærer under eneansvar, at klimaanlægmodellerne, som denne deklaration vedrører:
11 (S) deklarerar i egenskap av huvudansvarig, att luftkonditioneringsmodellerna som berörs av denna deklaration innebär att:
12 (N) erklærer et fullstendig ansvar for at de luftkondisjoneringsmodeller som berøres av denne deklarasjon innebærer at:
13 (FIN) ilmoittaa yksinomaan omalla vastuullaan, että tämän ilmoituksen tarkoittamat ilmastointilaitteiden mallit:
14 (CZ) prohlašuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:
15 (HR) izjavljuje pod isključivo vlastitom odgovornošću da su modeli klima uređaja na koje se ova izjava odnosi:
16 (H) teljes felelőssége tudatában kijelenti, hogy a klímaberendezés modellek, melyekre e nyilatkozat vonatkozik:
17 (PL) deklaruje na własną i wyłączną odpowiedzialność, że modele klimatyzatorów, których dotyczy niniejsza deklaracja:
18 (RO) declară pe proprie răspundere că aparatele de aer condiţionat la care se referă această declaraţie:
19 (SLO) z vso odgovornostjo izjavlja, da so modeli klimatskih naprav, na katere se izjava nanaša:
20 (EST) kinnitab oma täielikul vastutusel, et käesoleva deklaratsiooni alla kuuluvad kliimaseadmete mudelid:
21 (BG) декларира на своя отговорност, че моделите климатична инсталация, за които се отнася тази декларация:
22 (LT) visiška savo atsakomybe skelbia, kad oro kondicionavimo prietaisų modeliai, kuriems yra taikoma ši deklaracija:
23 (LV) ar pilnu atbildību apliecina, ka tālāk uzskaitīto modeļu gaisa kondicionētāji, uz kuriem attiecas šī deklarācija:
24 (SK) vyhlasuje na vlastnú zodpovednosť, že tieto klimatizačné modely, na ktoré sa vzťahuje toto vyhlásenie:
25 (TR) tamamen kendi sorumluluğunda olmak üzere bu bildirinin ilgili olduğu klima modellerinin aşağıdaki gibi olduğunu beyan eder:

FXZQ20MVE, FXZQ25MVE, FXZQ32MVE, FXZQ40MVE, FXZQ50MVE
FXCQ20MVE, FXCQ25MVE, FXCQ32MVE, FXCQ40MVE, FXCQ50MVE, FXCQ63MVE, FXCQ80MVE, FXCQ125MVE
FXMQ40MVE, FXMQ50MVE, FXMQ63MVE, FXMQ80MVE, FXMQ100MVE, FXMQ125MVE, FXMQ200MVE, FXMQ250MVE
FXLQ20MVE, FXLQ25MVE, FXLQ32MVE, FXLQ40MVE, FXLQ50MVE, FXLQ63MVE
FXNQ20MVE, FXNQ25MVE, FXNQ32MVE, FXNQ40MVE, FXNQ50MVE, FXNQ63MVE
FXHQ32MVE, FXHQ63MVE, FXHQ100MVE
FXSQ20MVE, FXSQ25MVE, FXSQ32MVE, FXSQ40MVE, FXSQ50MVE, FXSQ63MVE, FXSQ80MVE, FXSQ100MVE, FXSQ125MVE
FXKQ25MVE, FXKQ32MVE, FXKQ40MVE, FXKQ63MVE
FXAQ20MVE, FXAQ25MVE, FXAQ32MVE, FXAQ40MVE, FXAQ50MVE, FXAQ63MVE
FXUQ71MV1, FXUQ100MV1, FXUQ125MV1
BEVQ71MVE, BEVQ100MVE, BEVQ125MVE
FXMQ125MFV1, FXMQ200MFV1, FXMQ250MFV1
FXAQ20MHV1, FXAQ25MHV1, FXAQ32MHV1, FXAQ40MHV1, FXAQ50MHV1
BEVQ50MVE
FXLQ20MHV1, FXLQ25MHV1, FXLQ32MHV1, FXLQ40MHV1, FXLQ50MHV1,
FXMQ40MAVE, FXMQ50MAVE, FXMQ63MAVE, FXMQ80MAVE
FXMQ100MAVE, FXMQ125MAVE, FXMQ200MAVE, FXMQ250MAVE
FXLQ20MAVE, FXLQ25MAVE, FXLQ32MAVE, FXLQ40MAVE
FXLQ50MAVE, FXLQ63MAVE
FXNQ20MAVE, FXNQ25MAVE, FXNQ32MAVE, FXNQ40MAVE
FXNQ50MAVE, FXNQ63MAVE
FXHQ32MAVE, FXHQ63MAVE, FXHQ100MAVE
FXKQ25MAVE, FXKQ32MAVE, FXKQ40MAVE, FXKQ63MAVE
FXAQ20MAVE, FXAQ25MAVE, FXAQ32MAVE, FXAQ40MAVE
FXAQ50MAVE, FXAQ63MAVE
FXUQ71MAV1, FXUQ100MAV1, FXUQ125MAV1
BEVQ71MAVE, BEVQ100MAVE, BEVQ125MAVE

01 are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our instructions:
02 der/den folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entspricht/entsprechen, unter der Voraussetzung, daß sie gemäß unseren Anweisungen eingesetzt werden:
03 sont conformes à la/aux norme(s) ou autre(s) document(s) normatif(s), pour autant qu'ils soient utilisés conformément à nos instructions:
04 conform de volgende norm(en) of één of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig onze instructies:
05 están en conformidad con la(s) siguiente(s) norma(s) u otro(s) documento(s) normativo(s), siempre que sean utilizados de acuerdo con nuestras instrucciones:
06 sono conformi al(i) seguente(i) standard(s) o altro(i) documento(i) a carattere normativo, a patto che vengano usati in conformità alle nostre istruzioni:
07 είναι σύμφωνα με το(α) ακόλουθο(α) πρότυπο(α) ή άλλο έγγραφο(α) κανονισμών, υπό την προϋπόθεση ότι χρησιμοποιούνται σύμφωνα με τις οδηγίες μας:
08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de acordo com as nossas instruções:
09 соответствуют следующим стандартам или другим нормативным документам, при условии их использования согласно нашим инструкциям:
10 overholder følgende standard(er) eller andet/andre retningsgivende dokument(er), forudsat at disse anvendes i henhold til vore instrukser:
11 respektive utrustning är utförd i överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under förutsättning att användning sker i överensstämmelse med våra instruktioner:
12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forutssetning av at disse brukes i henhold til våre instrukser:
13 vastaavat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme mukaisesti:
14 za předpokladu, že jsou využívány v souladu s našimi pokyny, odpovídají následujícím normám nebo normativním dokumentům:
15 u skladu sa slijedećim standardom(ima) ili drugim normativnim dokumentom(ima), uz uvjet da se oni koriste u skladu s našim uputama:
16 megfelelnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják:
17 spełniają wymogi następujących norm i innych dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi instrukcjami:
18 sunt în conformitate cu următorul (următoarele) standard(e) sau alt(e) document(e) normativ(e), cu condiţia ca acestea să fie utilizate în conformitate cu instrucţiunile noastre
19 skladni z naslednjimi standardi in drugimi normativi, pod pogojem, da se uporabljajo v skladu z našimi navodili:
20 on vastavuses järgmis(t)e standardi(te)ga või teiste normatiivsete dokumentidega, kui neid kasutatakse vastavalt meie juhenditele:
21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват съгласно нашите инструкции:
22 atitinka žemiau nurodytus standartus ir (arba) kitus norminius dokumentus su sąlyga, kad yra naudojami pagal mūsų nurodymus:
23 tad, ja lietoti atbilstoši ražotāja norādījumiem, atbilst sekojošiem standartiem un citiem normatīviem dokumentiem:
24 sú v zhode s nasledovnou(ými) normou(ami) alebo iným(i) normatívnym(i) dokumentom(ami), za predpokladu, že sa používajú v súlade s našim návodom:
25 ürünün, talimatlarımıza göre kullanılması koşuluyla aşağıdaki standartlar ve norm belirten belgelerle uyumludur:

EN60335-2-40,

01 following the provisions of:
02 gemäß den Vorschriften der:
03 conformément aux stipulations des:
04 overeenkomstig de bepalingen van:
05 siguiendo las disposiciones de:
06 secondo le prescrizioni per:
07 με τήρηση των διατάξεων των:
08 de acordo com o previsto em:
09 в соответствии с положениями:
10 under iagttagelse af bestemmelserne i:
11 enligt villkoren i:
12 gitt i henhold til bestemmelsene i:
13 noudattaen määräyksiä:
14 za dodržení ustanovení předpisu:
15 prema odredbama:
16 követi a(z):
17 zgodnie z postanowieniami Dyrektyw:
18 în urma prevederilor:
19 ob upoštevanju določb:
20 vastavalt nõuetele:
21 следвайки клаузите на:
22 laikantis nuostatų, pateikiamų:
23 ievērojot prasības, kas noteiktas:
24 održiavajúc ustanovenia:
25 bunun koşullarına uygun olarak:

Low Voltage 2006/95/EC
Machinery Safety 98/37/EC
Electromagnetic Compatibility 2004/108/EC *

01 Directives, as amended.
02 Direktiven, gemäß Änderung.
03 Directives, telles que modifiées.
04 Richtlijnen, zoals geamendeerd.
05 Directivas, según lo enmendado.
06 Direttive, come da modifica.
07 Οδηγιών, όπως έχουν τροποποιηθεί.
08 Directivas, conforme alteração em.
09 Директив со всеми поправками.
10 Direktiver, med senere ændringer.
11 Direktiv, med företagna ändringar.
12 Direktiver, med foretatte endringer.
13 Direktiivejä, sellaisina kuin ne ovat muutettuina.
14 v platném znění.
15 Smjernice, kako je izmijenjeno.
16 irányelv(ek) és módosításaik rendelkezéseit.
17 z późniejszymi poprawkami.
18 Directivelor, cu amendamentele respective.
19 Direktive z vsemi spremembami.
20 Direktiivid koos muudatustega.
21 Директиви, с техните изменения.
22 Direktyvose su papildymais.
23 Direktīvās un to papildinājumos.
24 Smernice, v platnom znení.
25 Değiştirilmiş halleriyle Yönetmelikler.

01 * as set out in <A> and judged positively by <B> according to the **Certificate** <C>.
02 * wie in der <A> aufgeführt und von <B> positiv beurteilt gemäß **Zertifikat** <C>.
03 * tel que défini dans <A> et évalué positivement par <B> conformément au **Certificat** <C>.
04 * zoals vermeld in <A> en positief beoordeeld door <B> overeenkomstig **Certificaat** <C>.
05 * como se establece en <A> y es valorado positivamente por <B> de acuerdo con el **Certificado** <C>.
06 * delineato nel <A> e giudicato positivamente da <B> secondo il **Certificato** <C>.
07 * όπως καθορίζεται στο <A> και κρίνεται θετικά από το <B> σύμφωνα με το **Πιστοποιητικό** <C>.
08 * tal como estabelecido em <A> e com o parecer positivo de <B> de acordo com o **Certificado** <C>.
09 * как указано в <A> и в соответствии с положительным решением <B> согласно **Свидетельству** <C>.
10 * som anført i <A> og positivt vurderet af <B> i henhold til **Certifikat** <C>.
11 * enligt <A> och godkäntsav <B> enligt **Certifikatet** <C>.
12 * som det fremkommer i <A> og gjennom positiv bedømmelse av <B> ifølge **Sertifikat** <C>.
13 * jotka on esitetty asiakirjassa <A> ja jotka <B> on hyväksynyt **Sertifikaatin** <C> mukaisesti.
14 * jak bylo uvedeno v <A> a pozitivně zjištěno <B> v souladu s **osvědčením** <C>.
15 * kako je izloženo u <A> i pozitivno ocijenjeno od strane <B> prema **Certifikatu** <C>.
16 * a(z) <A> alapján, a(z) <B> igazolta a megfelelést, a(z) <C> **tanúsítvány** szerint.
17 * zgodnie z dokumentacją <A>, pozytywną opinią <B> i **Świadectwem** <C>.
18 * aşa cum este stabilit în <A> şi apreciat pozitiv de <B> în conformitate cu **Certificatul** <C>.
19 * kot je določeno v <A> in odobreno s strani <B> v skladu s **certifikatom** <C>.
20 * nagu on näidatud dokumendis <A> ja heaks kiidetud <B> järgi vastavalt **sertifikaadile** <C>.
21 * както е изложено в <A> и оценено положително от <B> съгласно **Сертификата** <C>.
22 * kaip nustatyta <A> ir kaip teigiamai nuspręsta <B> pagal **Sertifikatą** <C>.
23 * kā norādīts <A> un atbilstoši <B> pozitīvajam vērtējumam saskaņā ar **sertifikātu** <C>.
24 * ako bolo uvedené v <A> a pozitívne zistené <B> v súlade s **osvedčením** <C>.
25 * <A>'da belirtildiği gibi ve <C> **Sertifikasına** göre <B> tarafından olumlu olarak değerlendirildiği gibi.

<A>	DAIKIN.TCF.022E1/10-2007
<B>	TÜV Rheinlard EPS B.V.
<C>	0305020101

DAIKIN

Shinri Sada

Shinri Sada
Manager Quality Control Department
1st of May 2009

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1. SAFETY PRECAUTIONS

Please read these “SAFETY PRECAUTIONS” carefully before installing air conditioning unit and be sure to install it correctly. After completing installation, conduct a trial operation to check for faults and explain to the customer how to operate the air conditioner and take care of it with the aid of the operation manual. Ask the customer to store the installation manual along with the operation manual for future reference.

This air conditioner comes under the term “appliances not accessible to the general public”.

Safety Precaution

This unit is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Meaning of WARNING and CAUTION notices

⚠ **WARNING**........Failure to follow these instructions properly may result in personal injury or loss of life.

⚠ **CAUTION**.........Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

⚠ WARNING

- Ask your dealer or qualified personnel to carry out installation work.
  Do not attempt to install the air conditioner yourself. Improper installation may result in water leakage, electric shocks or fire.
- Install the air conditioner in accordance with the instructions in this installation manual.
  Improper installation may result in water leakage, electric shocks or fire.
- Consult your local dealer regarding what to do in case of refrigerant leakage. When the air conditioner is to be installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the concentration limit in the event of a leakage. Otherwise, this may lead to an accident due to oxygen depletion.
- Be sure to use only the specified accessories and parts for installation work.
  Failure to use the specified parts may result in the unit falling, water leakage, electric shocks or fire.
- Install the air conditioner on a foundation strong enough to withstand the weight of the unit.
  A foundation of insufficient strength may result in the equipment falling and causing injury.
- Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes.
  Failure to do so during installation work may result in the unit falling and causing accidents.
- Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local laws and regulations and this installation manual.
  An insufficient power supply capacity or improper electrical construction may lead to electric shocks or fire.
- Make sure that all wiring is secured, the specified wires are used, and that there is no strain on the terminal connections or wires.
  Improper connections or securing of wires may result in abnormal heat build-up or fire.
- When wiring the power supply and connecting the remote controller wiring and transmission wiring, position the wires so that the control box lid can be securely fastened.
  Improper positioning of the control box lid may result in electric shocks, fire or the terminals overheating.
- If refrigerant gas leaks during installation, ventilate the area immediately.
  Toxic gas may be produced if the refrigerant comes into contact with fire.
- After completing installation, check for refrigerant gas leakage.
  Toxic gas may be produced if the refrigerant gas leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker.
- Be sure to switch off the unit before touching any electrical parts.
- Do not directly touch the refrigerant leaked from refrigerant piping connections.
  Frostbite may be caused.
- Be sure to earth the air conditioner.
  Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead. Imperfect earthing may result in electric shocks or fire.
  A high surge current from lightning or other sources may cause damage to the air conditioner.
- Be sure to install an earth leakage breaker.
  Failure to install an earth leakage breaker may result in electric shocks or fire.

⚠ CAUTION

- While following the instructions in this installation manual, install drain piping to ensure proper drainage and insulate piping to prevent condensation.
  Improper drain piping may result in indoor water leakage and property damage.
- Install the indoor and outdoor units, power cord and connecting wires at least 1 meter away from televisions or radios to prevent picture interference and noise.
  (Depending on the incoming signal strength, a distance of 1 meter may not be sufficient to eliminate noise.)
- Remote controller (wireless kit) transmitting distance can be shorter than expected in rooms with electronic fluorescent lamps (inverter or rapid start types).
  Install the indoor unit as far away from fluorescent lamps as possible.

- Do not install the air conditioner in the following locations:
  1. Where there is a high concentration of mineral oil spray or vapour (e.g. a kitchen).
     Plastic parts will deteriorate, parts may fall off and water leakage could result.
  2. Where corrosive gas, such as sulphurous acid gas, is produced.
     Corroding of copper pipes or soldered parts may result in refrigerant leakage.
  3. Near machinery emitting electromagnetic radiation.
     Electromagnetic radiation may disturb the operation of the control system and result in a malfunction of the unit.
  4. Where flammable gas may leak, where there is carbon fibre or ignitable dust suspensions in the air, or where volatile flammables such as paint thinner or gasoline are handled.
     Operating the unit in such conditions may result in fire.
- The air conditioner is not intended for use in a potentially explosive atmosphere.

2. BEFORE INSTALLATION

When moving the unit after removing it from the box, remove the corner covers and use the 4 hoisting hooks to move it. Do not apply force to the refrigerant piping, drain piping or resin parts.

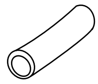
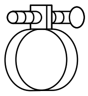
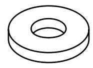
- When moving the unit while removing it from the box, be sure to lift it by holding on to the four lifting lugs without exerting any pressure on other parts, especially swing flap, the refrigerant piping, drain piping, and other resin parts.
- Be sure to check the type of R410A refrigerant to be used before installing the unit. (Using an incorrect refrigerant will prevent normal operation of the unit.)
- Decide upon a line of transport.
- Leave the unit inside its packaging while moving, until reaching the installation site. Use a sling of soft material, where unpacking is unavoidable or protective plates together with a rope when lifting, to avoid damage or scratches to the unit.
- Refer to the installation manual of the outdoor unit for items not described in this manual.
- A separate BEV unit is required for this model.
  See the installation manual that comes with the BEV unit when doing the installation.
- Installation should only be carried out after checking in advance the type of refrigerant to be used. (Using the wrong refrigerant will prevent the unit from functioning properly.)
- Do not dispose of any parts necessary for installation until the installation is complete.

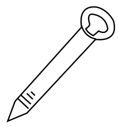
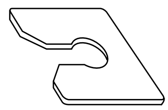
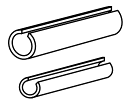
2-1 PRECAUTIONS

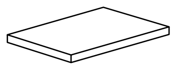
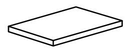
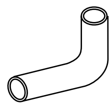
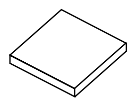
- Be sure to read this manual before installing the indoor unit.
- When selecting installation site, refer to the paper pattern.
- This unit is suitable for installation in a household, commercial and light industrial environment.
- Do not install or operate the unit in rooms mentioned below.
  - Laden with mineral oil, or filled with oil vapor or spray like in kitchens. (Plastic parts may deteriorate.)
  - Where corrosive gas like sulfurous gas exists. (Copper tubing and brazed spots may corrode.)
  - Where volatile flammable gas like thinner or gasoline is used.
  - Where machines can generate electromagnetic waves. (Control system may malfunction.)
  - Where the air contains high levels of salt such as that near the ocean and where voltage fluctuates greatly such as that in factories. Also in vehicles or vessels.

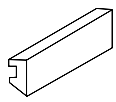
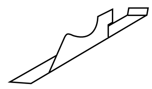
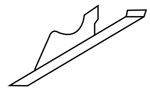
2-2 ACCESSORIES

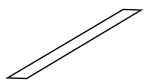
Check the following accessories are included with the unit.

Name	1) Drain hose	2) Metal clamp	3) Washers for locking hanger
Quantity	1 pc.	1 pc.	8 pcs.
Shape			

Name	4) Clamp	5) Washer fixing plate	Insulation for fitting
Quantity	6 pcs.	4 pcs.	1 each
Shape			6) For gas piping  7) For liquid piping

Name	Sealing pad	10) Elbow	11) Paper pattern for installation
Quantity	2 pcs.	1 pc.	1 pc.
Shape	8) Large  9) Small 		Also used as packing material 

Name	12) Blocking pad	13) Retainer for blocking pad	14)Retainer for blocking pad
Quantity	2 pcs.	2 pcs.	2 pcs.
Shape			

Name	15) Center retainer for blocking pad	(Other) • Operation manual • Installation manual
Quantity	2 pcs.	
Shape		

2-3 OPTIONAL ACCESSORIES

- The remote controller are required for this indoor unit.
- These are two types of remote controllers: wired and wireless. Select a remote controller from Table 1 according to customer request and install in an appropriate place.
  (For installation, follow the Installation manual included with the remote controllers.)

Table 1

Remote controller	
Wired type	
Wireless type	Heat pump type
	Cooling only type

NOTE

- If you wish to use a remote controller that is not listed in Table 1, select a suitable remote controller after consulting catalogs and technical materials.

FOR THE FOLLOWING ITEMS, TAKE SPECIAL CARE DURING CONSTRUCTION AND CHECK AFTER INSTALLATION IS FINISHED.

1. Items to be checked after completion of work

Items to be checked	If not properly done, what is likely to occur	Check
Are the indoor and outdoor unit fixed firmly?	The unit may drop, vibrate or make noise.	
Is the gas leak test finished?	It may result in insufficient cooling.	
Is the unit fully insulated?	Condensate may drip.	
Does drainage flow smoothly?	Condensate may drip.	
Does the power supply voltage correspond to that shown on the name plate?	The unit may malfunction or the components burn out.	
Are wiring and piping correct?	The unit may malfunction or the components burn out.	
Is the unit safely grounded?	Risk of electric shock at electric leakage.	
Is wiring size according to specifications?	The unit may malfunction or the components burn out.	
Is something blocking the air outlet or inlet of either the indoor or outdoor units?	It may result in insufficient cooling.	
Are refrigerant piping length and additional refrigerant charge noted down?	The refrigerant charge in the system is not clear.	

*Also review the "SAFETY PRECAUTIONS"

2. Items to be checked at time of delivery

Items to be checked	Check
Did you explain about operations while showing the operation manual to your customer?	
Did you hand the operation manual over to your customer?	

3. Points for explanation about operations

The items with ⚠WARNING and ⚠CAUTION marks in the operation manual are the items pertaining to possibilities for bodily injury and material damage in addition to the general usage of the product. Accordingly, it is necessary that you make a full explanation about the described contents and also ask your customers to read the operation manual.

2-4 NOTE TO THE INSTALLER

Be sure to instruct customers how to properly operate the unit (especially cleaning filters, operating different functions, and adjusting the temperature) by having them carry out operations themselves while looking at the manual.

3. SELECTING INSTALLATION SITE AND AIR FLOW DIRECTION

3-1 Select an installation site where the following conditions are fulfilled and that meets your customer's approval.

- In the upper space (including the back of the ceiling) of the indoor unit where there is no possible dripping of water from the refrigerant piping, drain piping, water pipinge, etc.
- Where optimum air distribution can be ensured.
- Where nothing blocks air passage.
- Where condensate can be properly drained.
- Where the ceiling is strong enough to bear the indoor unit weight.
- Where the false ceiling is not noticeably on an incline.
- Where sufficient clearance for maintenance and service can be ensured.
- Where there is no risk of flammable gas leakage.
- Where piping between indoor and outdoor units is possible within the allowable limit.
  (Refer to the installation manual for the outdoor and BEV units.)

[PRECAUTION]

If installing the wireless kit in a room with electronic fluorescent lighting (inverter or rapid start type), the remote controller's transmission distance may be shortened. Indoor units should be installed as far away from fluorescent lighting as possible.

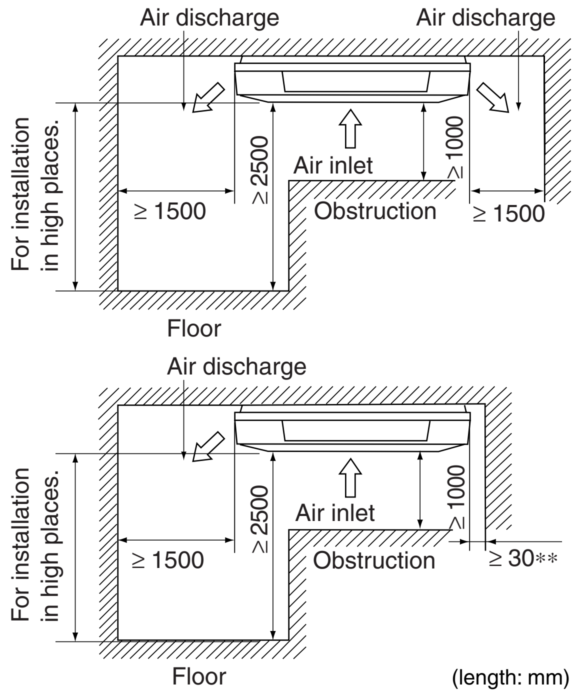
- Install the indoor and outdoor units, power supply wiring and connecting wiring at least 1 meter away from televisions or radios in order to prevent image interference or noise.
  (Depending on the radio waves, a distance of 1 meter may not be sufficient enough to eliminate the noise.)

[CAUTION]

Only use the included parts or parts which match the specifications when installing the unit.

- Install the indoor unit no less than 2.5m above the floor. Where unavoidably lower, take what measures are necessary to keep hands out of the air outlet.

Space required for installation



** Space is required to attach/detach corner covers.

3-2 Air flow direction

Select the air flow direction that best suits the unit's location. 2-way and 3-way air flow must be set from the remote controller. For details, see "10. FIELD SETTINGS".

NOTE

- Restrictions are placed on piping direction, therefore select flow direction from the below patterns.
  [Air flow patterns] (Refer to Fig. 1)
  (Illustrations seen from ceiling)
  A, B, C and D indicate drain pans.

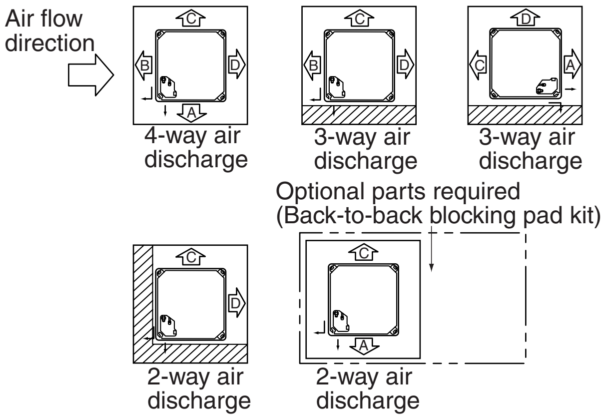


Fig. 1

Refrigerant piping direction
→ To the rear (Straight piping)
↱ To the right (Elbow required)
Upward running refrigerant piping are possible in all patterns.

3-3 Use suspension bolts for installation. Check whether the ceiling is strong enough to support the weight of the unit or not. If there is a risk, reinforce the ceiling before installing the unit.

(Installation pitch is marked on the paper pattern for installation. Refer to it to check for points requiring reinforcing.)

4. PREPARATIONS BEFORE INSTALLATION

4-1 FOR 4-WAY AIR DISCHARGE

1. **Relation of holes for indoor unit, suspension bolt position, piping and wiring. (Refer to Fig. 2)**
   (Illustrations seen from ceiling)

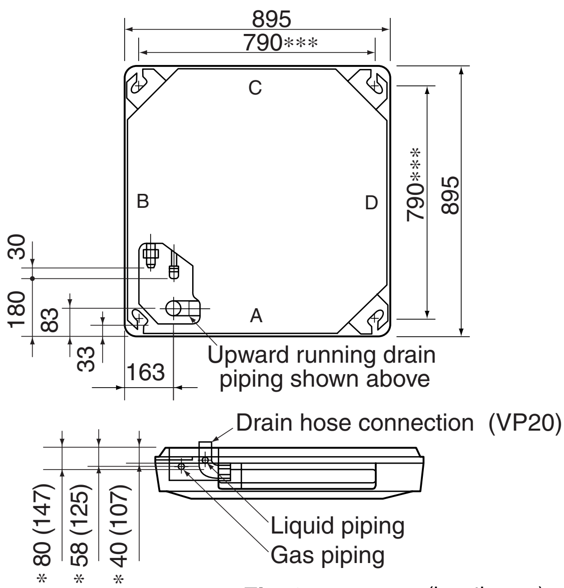


Fig. 2 (length: mm)

* Dimensions in ( ) for 100 and 125 models
*** Suspension bolt pitch

2. **Make holes for suspension bolts, refrigerant and drain piping, and wiring. (Refer to Fig. 3)**
   - Refer to the paper patten for the locations.
   - Select the location for each of holes and open the holes in the ceiling.

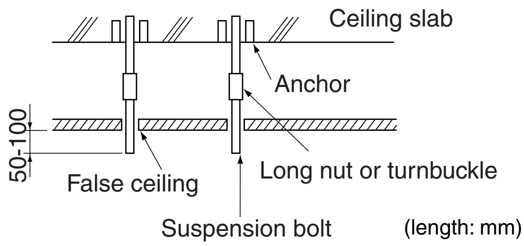


Fig. 3

NOTE
- All the above parts are field supplied.

(Use either a M8-M10 size bolt)
Use a hole-in anchor for existing ceilings, and a sunken insert, sunken anchor or other field supplied parts for new ceilings to reinforce the ceiling to bear the weight of the unit. Adjust clearance from the false ceiling before proceeding further.

3. **Detach the air intake grille and corner covers from the indoor unit.**
   - Detach the air intake grille. **(Refer to Fig. 4 and 5)**
     - Slide the locking knobs (×2) on the air intake grille inward (direction of arrows) and lift upwards.
     - Open the air intake grille to a 45° angle and detach from the unit.
     - Detach the corner covers.

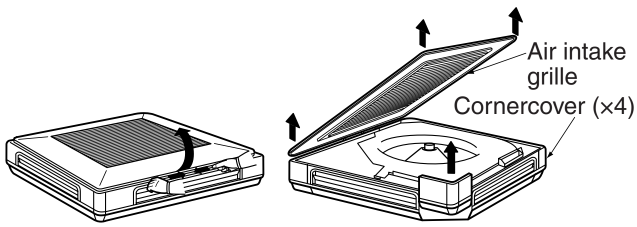


Fig. 4

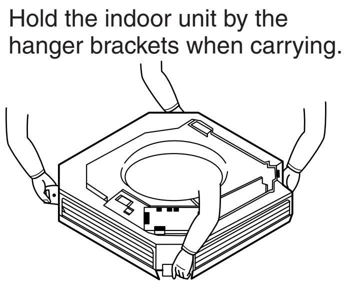


Fig. 5

[TO CHANGE AIR FLOW RATE]
- When shipped from the factory, the shutters on air outlets C and D are closed so that air flow rate is the same in all four directions.
- Air flow rate can be changed by sliding the shutter. **(Refer to Fig. 6 and 7)**

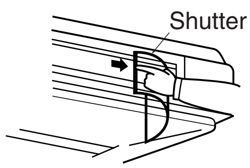


Fig. 6

⚠ CAUTION

Be careful not to touch the heat exchanger fins.

NOTE

- Illustration seen from ceiling

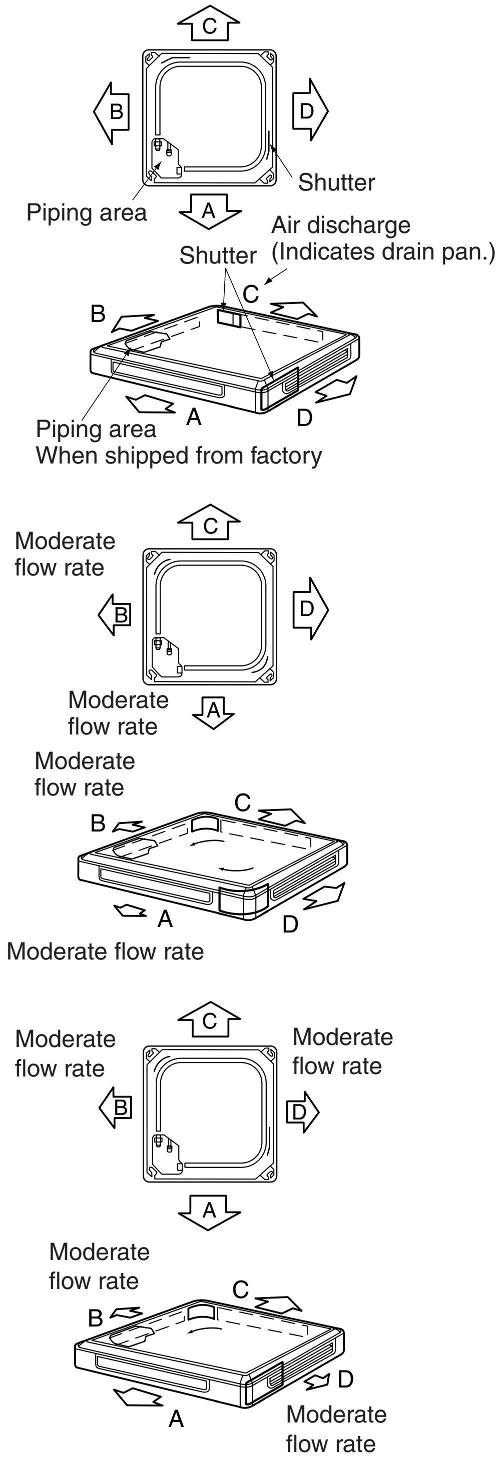


Fig. 7

[CEILING HEIGHT]

The indoor unit may be installed on ceilings up to 3.5m in height. However, it becomes necessary to make field settings by remote controller when installing the unit at a height over 2.7m.
Refer to the section entitled "10. FIELD SETTINGS" .
Install this unit where the height of bottom panel is more than 2.5m so that user cannot easily touch.

4-2 FOR 2-WAY OR 3-WAY AIR DISCHARGE

2-way and 3-way air discharge must be set from the remote controller. For details, see "10. FIELD SETTINGS".

1. **Relation of holes for indoor unit, suspension bolt position, piping and wiring. (Refer to Fig. 8)**

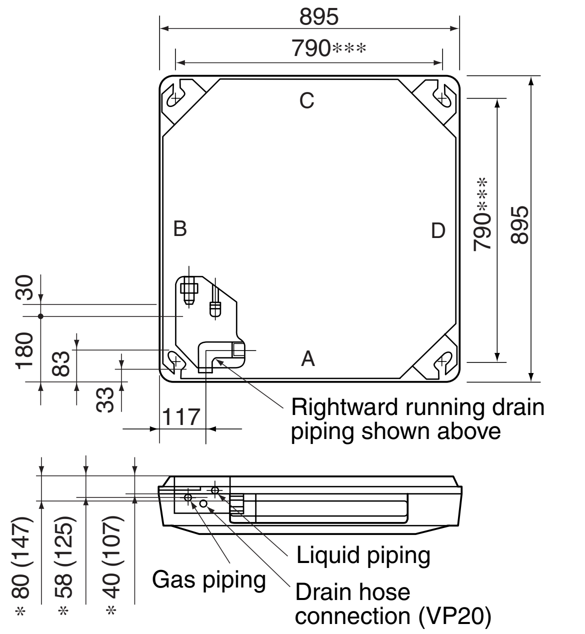
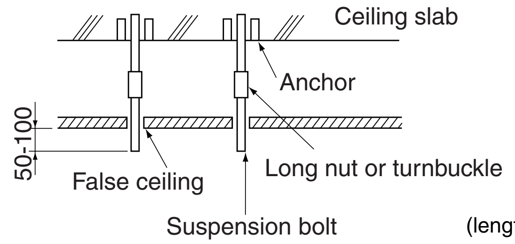


Fig. 8 (length: mm)

NOTE

- Illustrations seen from ceiling
  ∗ Dimension in ( ) for 100 and 125models
  ∗∗∗ Suspension bolt pitch

2. **Make holes for suspension bolts, refrigerant and drain piping, and wiring. (Refer to Fig. 9)**
   - Refer to paper pattern for the locations.
   - Select the location for each of holes and open the holes in the ceiling.



(length: mm)

Fig. 9

NOTE

- To change air flow rate, select a pattern from "TO CHANGE AIR FLOW RATE" and determine the location of piping.
- All the above parts are field supplied.

  (Use either a M8-M10 size bolt.)
  Use a hole-in anchor for existing ceilings, and a sunken insert, sunken anchor or other field supplied parts for new ceilings to reinforce the ceiling to bear the weight of the unit.
  Adjust clearance from the false ceiling before proceeding further.

3. **Detach the air intake grille and corner covers from the indoor unit.**

- Detach the air intake grille. **(Refer to Fig. 10)**
  - Slide the locking knobs (×2) on the air intake grille inward (direction of arrows) and lift upwards.
  - Open the air intake grille to a 45° angle and detach from the unit.
  - Detach the corner covers.

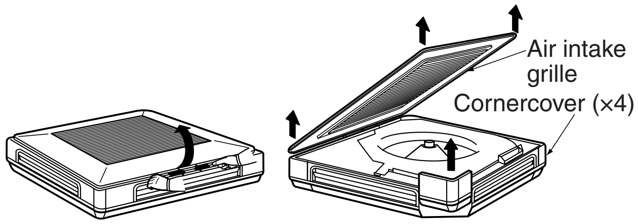
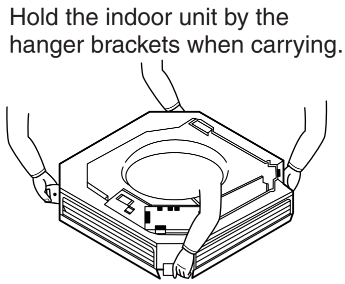


Fig. 10



[THE WAY TO BLOCK AIR DISCHARGE OUTLETS]

For 2-way air discharge, outlets A and B must be blocked.
For 3-way air discharge, outlets A or B must be blocked.

1. Detach the top decorative plate from the outlets to be blocked. **(Refer to Fig. 11)**

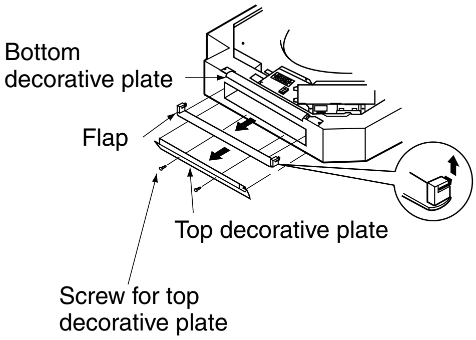


Fig. 11

2. Detach the flap from the outlets, too.
3. Attach the retainers to the blocking pad. **(Refer to Fig. 12)** Align the projections on the pads with the holes on the retainers, and tape parts together with 2-sided tape.

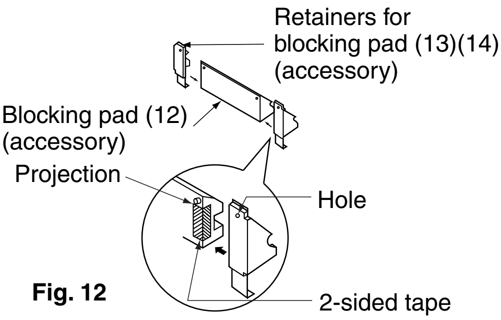


Fig. 12

4. After installing the blocking pads, attach the center retainer for blocking pad and the top decorative plate. **(Refer to Fig. 13)**

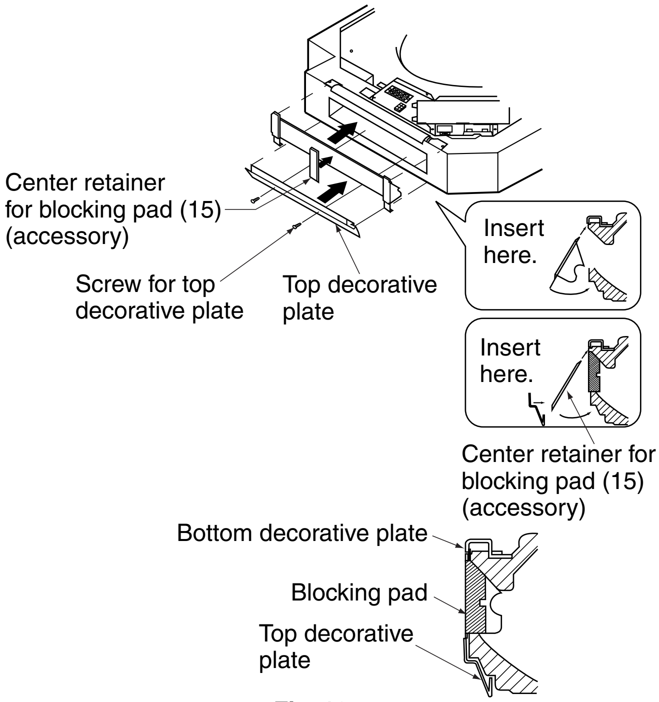


Fig. 13

⚠ CAUTION

Unless blocking pads are installed as indicated, air will leak and consequently cause dewing.

[TO CHANGE AIR FLOW RATE]

- When shipped from the factory, the shutters on air discharge outlets C and D are closed so that air flow rate is the same in all four directions.
- Air flow rate can be changed by sliding the shutter. **(Refer to Fig. 14)**

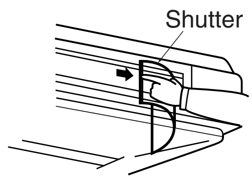


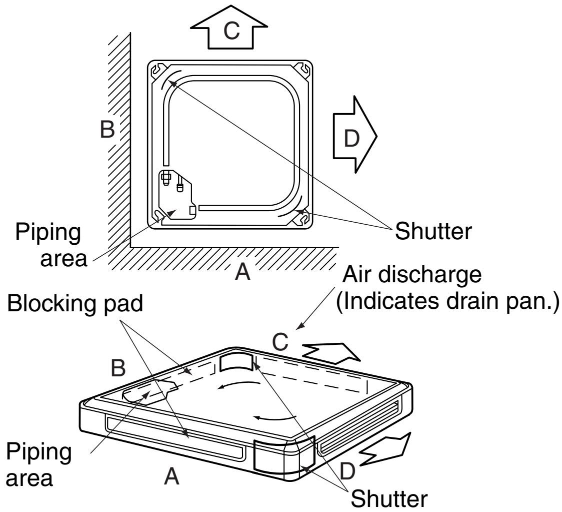
Fig. 14

⚠ CAUTION

Be careful not to touch the heat exchanger fins.

2-way air discharge (Refer to Fig. 15)

NOTE
- Illustrations seen from ceiling



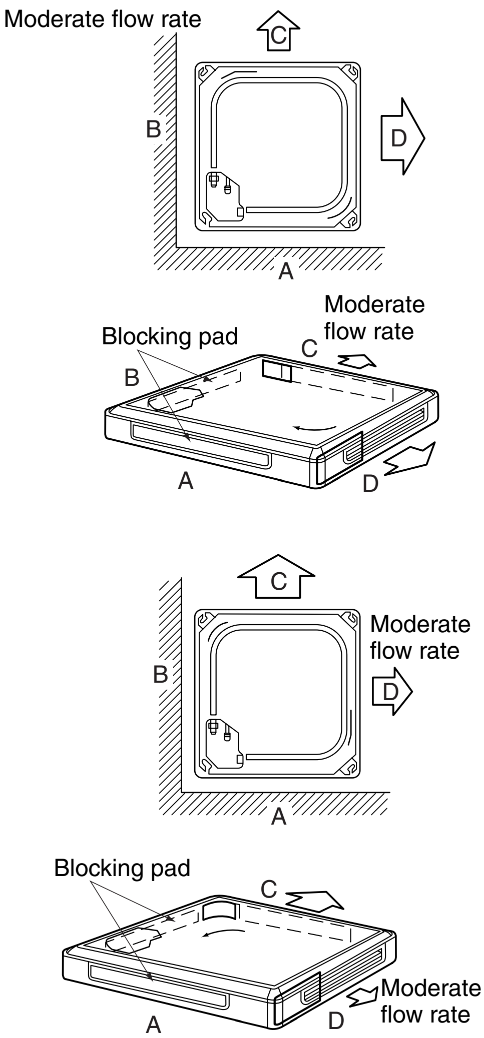
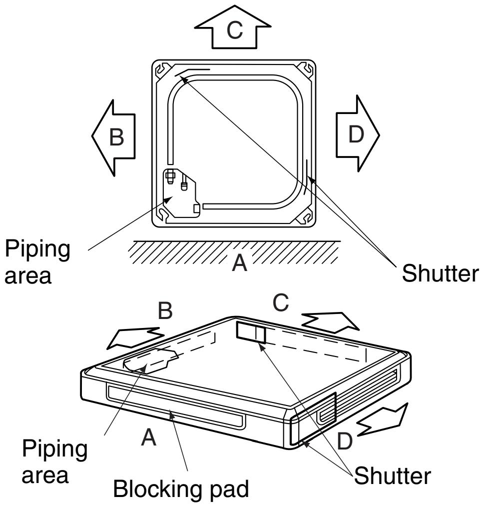


Fig. 15

3-way air discharge (Refer to Fig. 16)



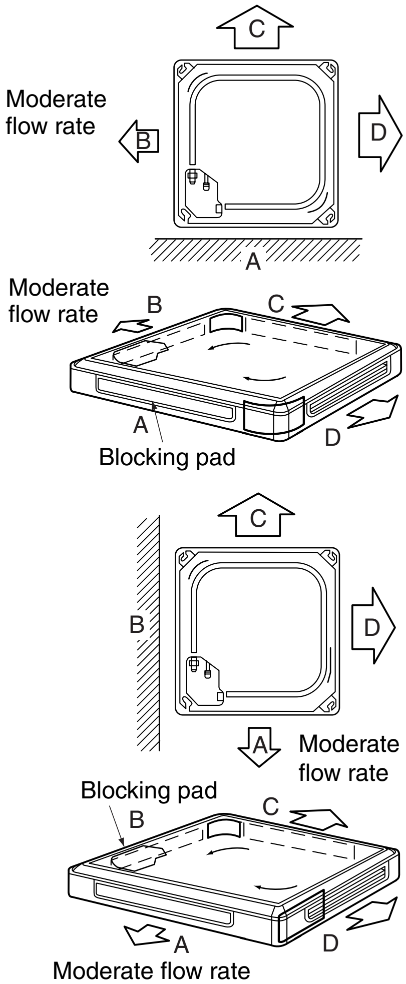


Fig. 16

[CEILING HEIGHT]

The indoor unit may be installed on ceilings up to 3.8 m in height. However, it becomes necessary to make field settings by remote controller when the height of the ceiling is over 3m in three directions or over 3.5m in two directions. Refer to the section entitled "10. FIELD SETTINGS" and the decoration panel installation manual.

Install this unit where the height of bottom panel is more than 2.5m so that user cannot easily touch.

5. INDOOR UNIT INSTALLATION

<<Installing optional accessories before installing the indoor unit is easier. >>

As for the parts to be used for installation work, be sure to use the provided accessories and specified parts designated by our company.

5-1 Fit the top nuts and washers over the suspension bolts (×4).

- Use the washer fixing plate (5) to keep the washer from falling out of place. Hang the unit from the hangers on side A, and then fit the bottom washers and nuts over the suspension bolts on that side. **(Refer to Fig. 17)**

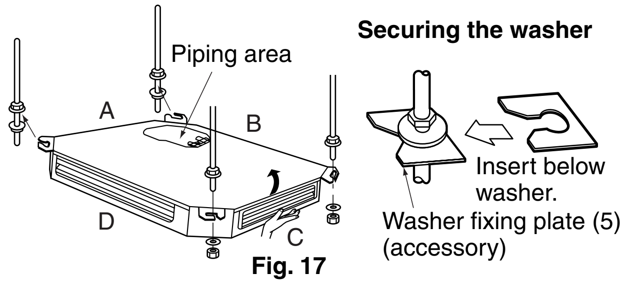


Fig. 17

5-2 Install the indoor unit. (Refer to Fig. 18)

- Lock the unit to the hangers on side A.
- Hook the unit onto the other 2 hangers and lock with bottom washers and nuts.

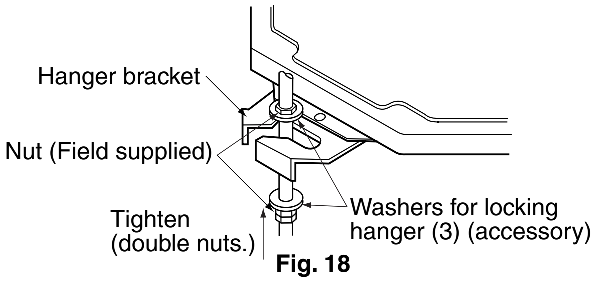


Fig. 18

5-3 Check whether the unit is level from sides C and D both. (Refer to Fig. 19)

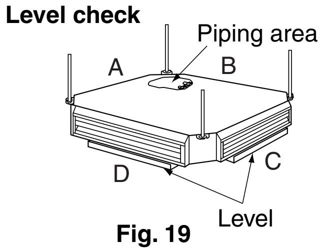


Fig. 19

5-4 Remove the washer fixing plate (5) used for preventing the washer from falling and tighten the upper nut.

⚠ CAUTION

- **Do not hold the swing flap when mounting, as this may break it.**
- The indoor unit is equipped with a built-in drain pump and float switch. At each of the unit's 4 corners, verify that it is level by using a water level or a waterfilled vinyl tube.
  (If the unit is tilted against condensate flow, the float switch may malfunction and cause water to drip.)

6. REFRIGERANT PIPING WORK

⟨For refrigerant piping of outdoor and BEV units, see the installation manual attached to the outdoor and BEV units.⟩
⟨Execute heat insulation work completely on both sides of the gas piping and the liquid piping.
Otherwise, a water leakage can result sometimes.⟩
⟨When using a heat pump, the temperature of the gas piping can reach up to approximately 120°C, so use insulation which is sufficiently resistant.⟩
⟨Improve the insulation on the refrigerant piping depending on the installation environment.
If the insulation is not sufficient, condensation may form on the surface of the insulation.⟩
⟨Before refrigerant piping work, check which type of refrigerant is used. Proper operation is not possible if the types of refrigerant are not the same.⟩

⚠ CAUTION

- **Use a pipe cutter and flare suitable for the type of refrigerant.**
- **Apply ester oil or ether oil around the flare section before connecting.**
- **To prevent dust, moisture or other foreign matter from infiltrating the tube, either pinch the end or cover it with tape.**
- **Do not allow anything other than the designated refrigerant to get mixed into the refrigerant circuit, such as air, etc. If any refrigerant gas leaks while working on the unit, ventilate the room thoroughly right away.**

6-1 Refrigerant piping can be run in 3 directions (Refer to Fig. 20)

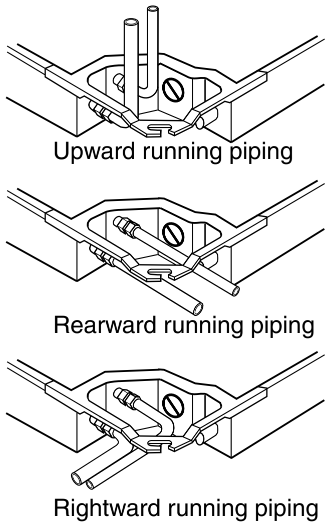


Fig. 20

- Use copper alloy seamless piping (ISO 1337).
- The outdoor unit is charged with refrigerant.
- Be sure to use both a spanner and torque wrench together, when connecting or disconnecting piping to/from the unit. **(Refer to Fig. 21)**
- Refer to the Table 2 for flare dimensions and tightening torque.

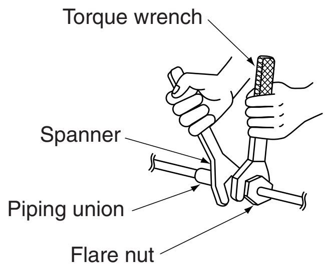


Fig. 21

NOTE

- Use the flare nut included with the unit main body.

⚠ CAUTION

- Over-tightening the flare nut may break it and/or cause the refrigerant to leak.

- When connecting the flare nut, apply ester oil or ether oil to the flare section (both inside and outside), and spin 3-4 times before screwing in. **(Refer to Fig. 22)**

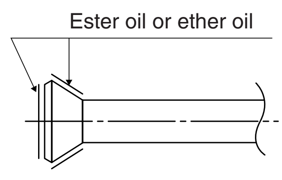
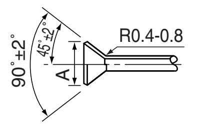


Fig. 22

Table 2

Pipe size	Tightening torque	Flare dimensions A (mm)	Flare
ϕ9.5(3/8")	32.7-39.9 N • m	12.8 – 13.2	
ϕ15.9(5/8")	61.8-75.4 N • m	19.3 – 19.7	

- Refer to "Table 2" to determine the proper tightening torque.

Not recommendable but in case of emergency

You must use a torque wrench but if you are obliged to install the unit without a torque wrench, you may follow the installation method mentioned below.

When you keep on tightening the flare nut with a spanner, there is a point where the tightening torque suddenly increases.
From that position, further tighten the flare nut the angle shown below:

Table 3

Pipe size	Further tightening angle	Recommended arm length of tool
ϕ9.5 (3/8")	60 to 90 degrees	Approx. 200mm
ϕ15.9 (5/8")	30 to 60 degrees	Approx. 300mm

After the work is finished, make sure to check that there is no gas leak.

- Make absolutely sure to execute heat insulation works on the pipe-connecting section after checking gas leakage by thoroughly studying the following figure and using the attached insulation for fitting (6) and (7). (Fasten both ends with the clamps (4).) **(Refer to Fig. 23)**
- Wrap the sealing pad (9) only around the insulation for the joints on the gas piping side.

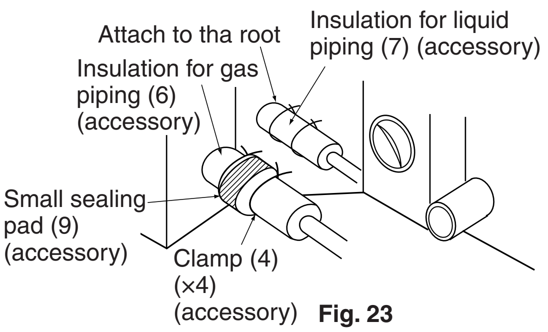


Fig. 23

⚠ CAUTION

For local insulation, be sure to insulate all the way to the piping connections inside the unit.
Exposed piping may cause leaking or burns on contact.

6-2 For upward and rightward running piping

- Upward and rightward running piping are easily rigged with the optional connecting elbow kit.
- For upward running piping, detach the pipe hole cover.
- Once piping are rigged, cut the pipe hole cover to size and reattach. Use scissors for cutting.**(Refer to Fig. 24)**

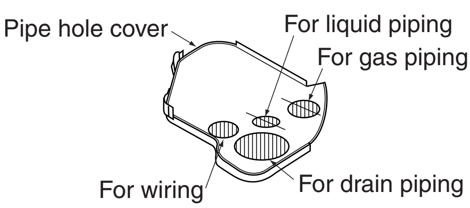


Fig. 24

Since there exists a possibility that small animals and insects might get inside the indoor unit, attach the wiring through covers and make sure there are no gaps in the through holes by applying putty or insulation (field supplied).

- When doing this, block any gaps between the piping penetration lid and the piping using putty to prevent dust from entering the indoor unit.

⚠ CAUTION

CAUTION TO BE TAKEN WHEN BRAZING REFRIGERANT PIPING

"Do not use flux when brazing refrigerant piping. Therefore, use the phosphor copper brazing filler metal (BCuP-2:JIS Z 3264/B-Cu93P-710/795:ISO 3677) which does not require flux."
(Flux has extremely harmful influence on refrigerant piping systems. For instance, if the chlorine based flux is used, it will cause piping corrosion or, in particular, if the flux contains fluorine, it will damage the refrigerant oil.)

- Before brazing local refrigerant piping, nitrogen gas shall be blown through the piping to expel air from the piping.
  If you brazing is done without nitrogen gas blowing, a large amount of oxide film develops inside the piping, and could cause system malfunction.
- When brazing the refrigerant piping, only begin brazing after having carried out nitrogen substitution or while inserting nitrogen into the refrigerant piping. Once this is done, connect the indoor unit with a flared connection.
- Nitrogen should be set to 0.02 MPa with a pressure-reducing valve if brazing while inserting nitrogen into the piping. **(Refer to Fig. 25)**

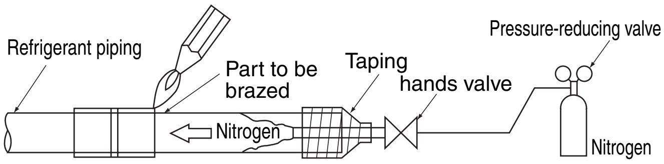


Fig. 25

⚠ CAUTION

Do not use anti-oxidants when brazing the piping joints.
Residue can clog piping and break equipment.

7. DRAIN PIPING WORK

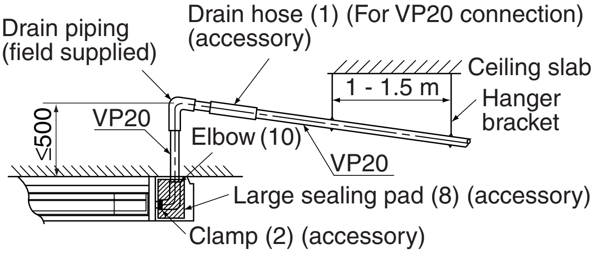
7-1 Rig drain piping (Refer to Fig. 26)

As for drain piping work, perform piping in such a manner that water can be drained properly.
As for drain piping, the connection can be made from three different directions.

- Employ a pipe with either the same diameter or with the diameter larger (excluding the raising section) than that of the connecting piping (PVC pipe, nominal diameter 20mm, outside diameter 26mm).
- Keep the drain piping short and sloping downwards at a gradient of at least 1/100 to prevent air pockets from forming. **(Refer to Fig. 27)**

⚠ CAUTION

Water pooling in the drainage piping can cause the drain to clog.



Notes on upward running drain hose

Fig. 26

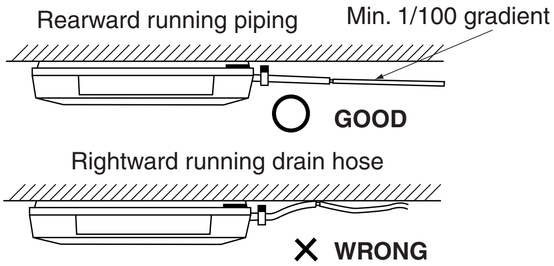
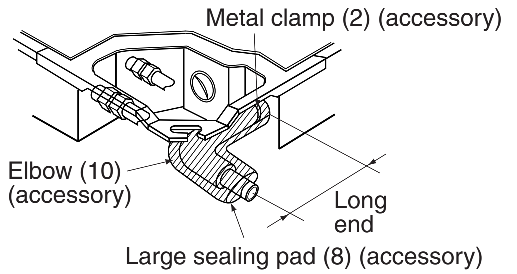
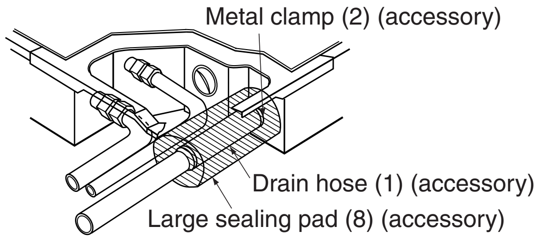
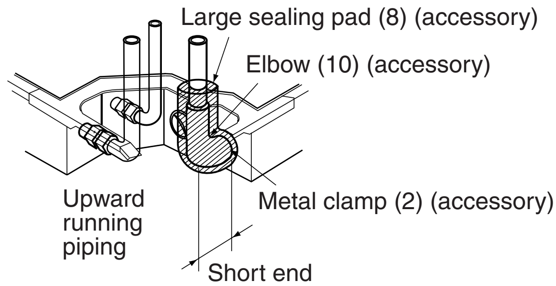


Fig. 27

- To keep the drain hose from sagging, space hanging wiring every 1 to 1.5m. **(Refer to Fig. 26)**
- Use only the included drain hose (1), (for rightward running drain hose) or elbow (10) (for upward running drain hose) and clamp (2).
- Fit the drain hose (1) or elbow (10) over the drain piping up to the neck and fasten tight with the metal clamp (2).
- Tighten the metal clamp (2) unit the screw head is less than 4mm from the hose.
- Insulate the metal clamp (2) and drain hose or elbow (10) with the included sealing pad (8). **(Refer to Fig. 28)**
- Make sure that heat insulation work is executed on the following 2 spots to prevent any possible water leakage due to dew condensation.
  - Insulate the drain hose inside the building
  - Drain socket







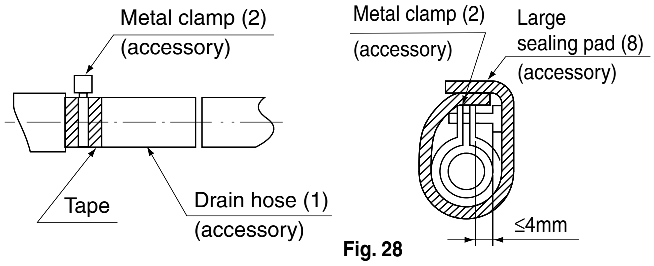


Fig. 28

⚠ CAUTION

- Do not twist or bend the drain hose (1), so that excessive force is not applied to it, as this could cause leaks.

- If converging multiple drain piping, install according to the procedure shown below. **(Refer to Fig. 29)**

  Select converging drain piping whose gauge is suitable for the operating capacity of the unit.

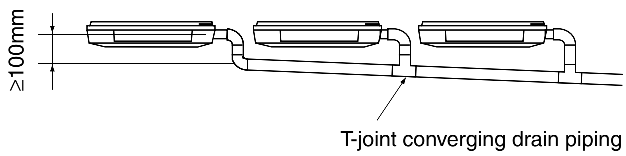


Fig. 29

PRECAUTIONS FOR UPWARD DRAIN RAISING PIPING

- Install the drain raising piping at a height of less than 500mm.
- Install the drain raising piping at a right angle to the indoor unit. **(Refer to Fig. 30)**

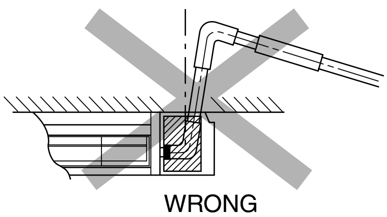


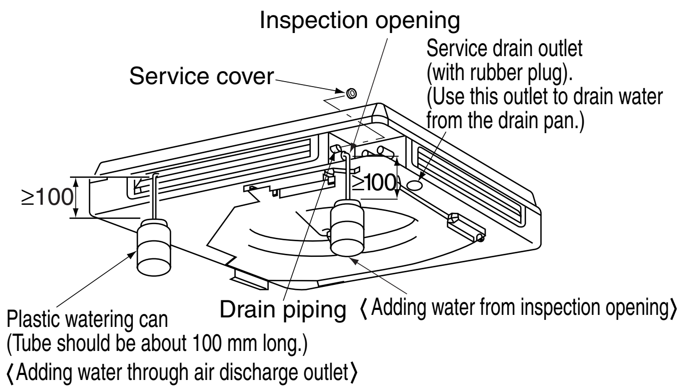
Fig. 30

⚠ CAUTION

If the upward running drain hose leans at a slant, the float switch will malfunction and water will leak.

7-2 After piping work is finished, check if drainage flows smoothly.

- Open the water inlet lid, add approximately 1 liter of water slowly and check drainage flow. **(Refer to Fig. 31)**



Method of adding water

Fig. 31

[Caution]

Drain piping connections

- Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain piping and corrode the heat exchanger.

WHEN ELECTRIC WIRING WORK IS FINISHED

- Check drainage flow during Cooling operation, explained under "11. TEST OPERATION".

WHEN ELECTRIC WIRING WORK IS NOT FINISHED

⚠ CAUTION

- Electrical wiring work should be done by a certified electrician.
- If someone who does not have the proper qualifications performs the work, perform the following after the test run is complete.

- Remove the control box lid and change the emergency switch above the PC board assembly of the indoor unit from "NORM." to "EMERG.". Connect the single-phase power supply (1, 3) and ground wire to the inter-unit wiring (50Hz 220-240V) terminal block and confirm drain operation.
  Be sure to change the switch before turning on the power.
  (Refer to Fig. 32)

⚠ CAUTION

- Clamp solidly to clamp C to tension is not added to the wiring connections.
- Be aware that the fan will turn during the operation.

- After confirming drainage, turn off the power and be sure to change the emergency switch back to "NORM.".

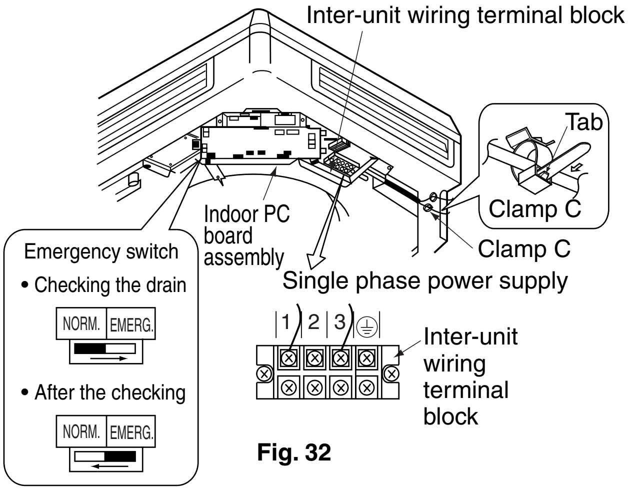


Fig. 32

8. ELECTRIC WIRING WORK

8-1 GENERAL INSTRUCTIONS

- All field supplied parts and materials and electric works must conform to local codes.
- Use copper wire only.
- For electric wiring work, refer also to "WIRING DIAGRAM" attached to the control box lid.
- For remote controller wiring details, refer to the installation manual attached to the remote controller.
- All wiring must be performed by an authorized electrician.
- One BEV unit is connected to one indoor unit. Mark each indoor unit and BEV unit as unit A, unit B..., and be sure the terminal block wiring to the outdoor unit and BS unit are properly matched. If wiring and piping between the outdoor unit and an indoor unit and BEV unit are mismatched, the system may cause a malfunction.
- A circuit breaker capable of shutting down power supply to the entire system must be installed.
- Refer to the installation manual attached to the outdoor unit for the size of power supply wiring connected to the outdoor unit, the capacity of the circuit breaker and switch, and wiring instructions.
- Be sure to ground the air conditioner
- Do not connect the ground wire to gas and water pipes, lightning rods, or telephone ground wires.
  - Gas pipes: might cause explosions or fire if gas leaks.
  - Water pipes: no grounding effect if hard vinyl piping is used.
  - Telephone ground wires or lightning rods: might cause abnormally high electric potential in the ground during lighting storms.
- **Specifications for field wire**

The remote controller wiring should be procured locally. Refer to the Table 4 when preparing one.

Table 4

	Wire	Size (mm^2)	Length
Inter-unit wiring	H05VV - U4G (NOTE 1)	2.5	(NOTE 3)
Remote controller wiring	Vinyl cord with sheath or cable (2 wire) (NOTE 2)	0.75 - 1.25	Max. 500m

NOTE

1. Shows only in case of protected pipes. Use H07RN-F in case of no protection.
2. Insulated thickness : 1mm or more
3. Refer to the installation manual of the BEV unit.

<Methods of wiring units and connecting remote controller wiring> (Refer to Fig. 33)

NOTE

1. All wiring except for the remote controller wires is polarized and must match the terminal symbol.
   - Wiring the units connections
     Remove the control box lid, and align the phases with those of the power supply terminal block inside to connect. Securely fix the wires with the included clamp material A, then fix them with the clamp material C likewise.
   - Remote controller wiring connections
     Connect to the remote controller terminal block. (no polarity)
     Securely fix the remote controller wiring with the included clamp material B, then fix it with the clamp material D likewise.

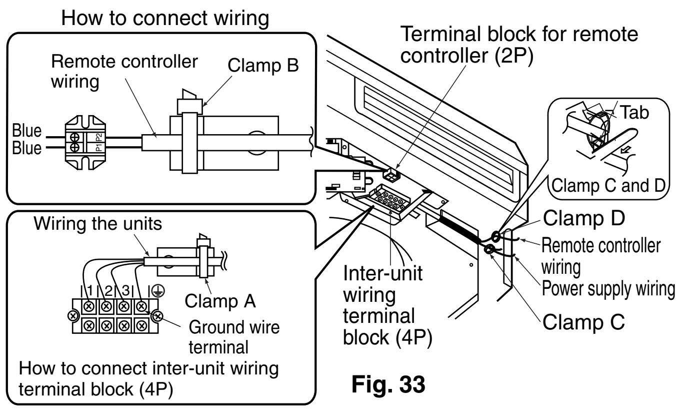


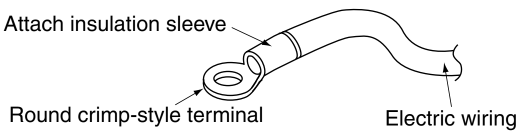
Fig. 33

⚠ CAUTION

- When clamping wiring, use the included clamping material to prevent outside pressure being exerted on the wiring connections and clamp firmly. When doing the wiring, make sure the wiring is neat and does not cause the control box lid to stick up, then close the cover firmly.
- When attaching the control box lid, make sure you do not pinch any wires.
- After all the wiring connections are done, fill in any gaps in the through holes with putty or insulation (field supplied) to prevent small animals and insects from entering the unit from outside. (If any do get in, they could cause short circuits in the control box.)
- Outside the unit, separate the weak wiring (remote controller wiring) and strong wiring (inter-unit wiring, ground wire, and other power wiring) at least 50 mm so that they do not pass through the same place together. Proximity may cause electrical interference, malfunctions, and breakage.

[PRECAUTIONS]

1. Use round crimp-style terminals for connecting wiring to the power supply terminal block.
   If unavailable, observe the following points when wiring.
   - Do not connect wiring of different gauge to the same power supply terminal.
     (Looseness in the connection may cause overheating.)
   - Use the specified electric wiring. Connect the wiring securely to the terminal. Lock the wiring down without applying excessive force to the terminal. (Tightening torque: 131N·cm ±10 %)



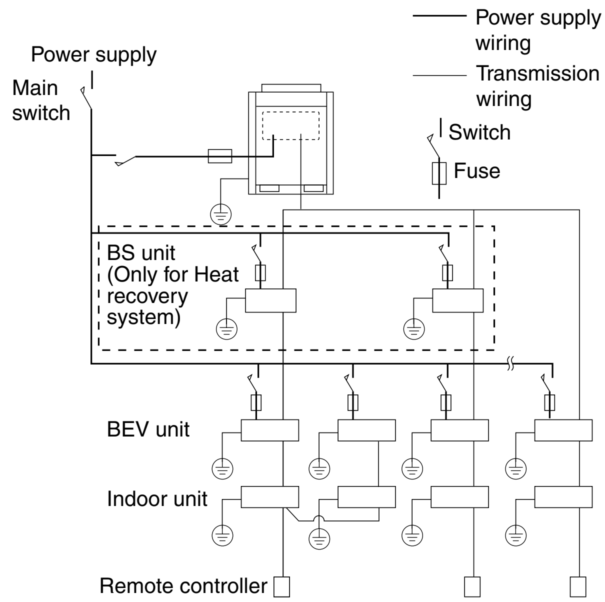
2. **Tightening torque for the terminal screws.**
   - Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.
   - If the terminal screws are tightened too hard, screws might be damaged.
   - Refer to the table below for the tightening torque of the terminal screws.

Terminal	Size	Tightening torque
Terminal block for remote controller (2P)	M3.5	0.79 – 0.97N·m
Inter-unit wiring and ground wire terminal block (4P)	M4	1.18 – 1.44N·m

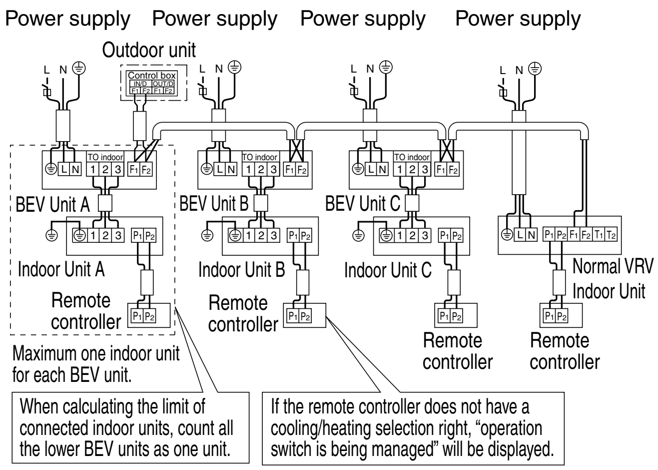
3. Do not connect wiring of different gauge to the same grounding terminal. Looseness in the connection may deteriorate protection.
4. Outside of the unit, keep remote controller wiring at least 50 mm away from power supply wiring. The unit may malfunction if subjected to electrical (external) noise.
5. For remote controller wiring, refer to the “INSTALLATION MANUAL OF REMOTE CONTROLLER” attached to the remote controller.
6. **Never connect power supply wiring to the terminal block for remote controller wiring. A mistake of the sort could damage the entire system.**
7. Use only specified wiring and tightly connect wiring to terminals. Be careful wiring do not place external stress on terminals. Keep wiring in neat order and so as not to obstruct other unit such as popping open the control box lid. Make sure the lid closes tight. Incomplete connections could result in overheating, and in worse case, electric shock or fire.

8-2 WIRING EXAMPLE

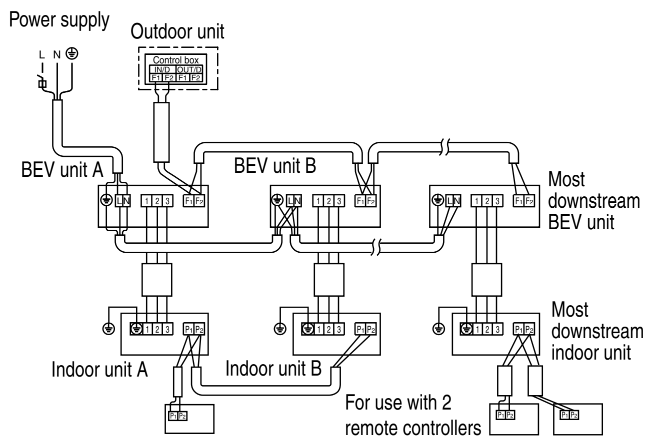
- Fit the power supply wiring of each unit with a switch and fuse as shown in the drawing.
  COMPLETE SYSTEM EXAMPLE (3 systems)



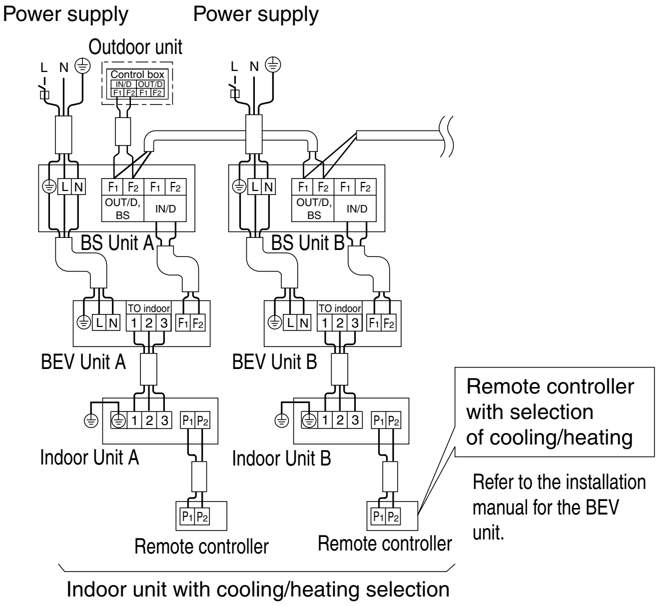
1. **When using 1 remote controller for 1 indoor unit. (Normal operation)**



2. **For group control or use with 2 remote controllers**



3. When including BS unit



8-3 CONTROL BY 2 REMOTE CONTROLLERS (Controlling 1 indoor unit by 2 remote controllers)

- When using 2 remote controllers, one must be set to "MAIN" and the other to "SUB".

MAIN/SUB CHANGEOVER

(1) Insert a ⊖ screwdriver into the recess between the upper and lower parts of remote controller and, working from the 2 positions, pry off the upper part. **(Refer to Fig. 34)**
(The remote controller PC board is attached to the upper part of the remote controller.)

(2) Turn the MAIN/SUB changeover switch on one of the two remote controller PC board to "S".
(Leave the switch of the other remote controller set to "M".)
(Refer to Fig. 35)

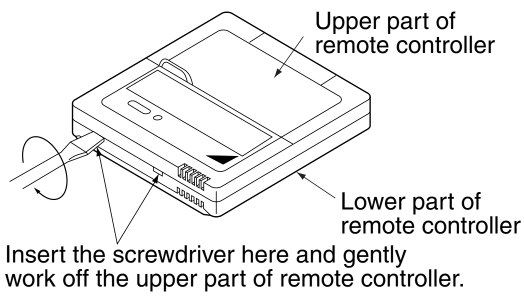


Fig. 34

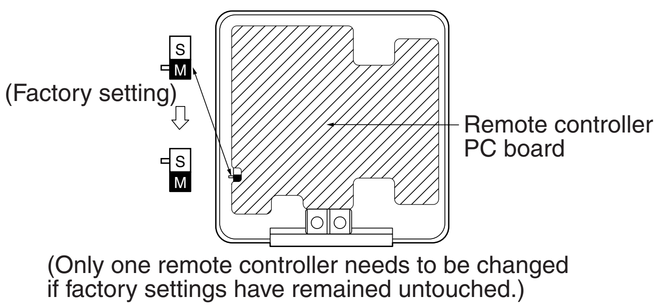


Fig. 35

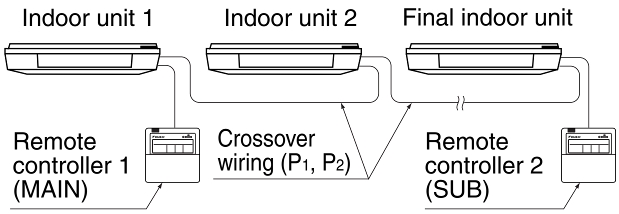
Wiring Method (See "8. ELECTRIC WIRING WORK")

(1) Remove the control box lid

(2) Add remote control 2 (slave) to the terminal block for remote controller (P_1, P_2) in the control box. (There is no polarity.)

<Caution>

- If using group control and two remote controllers at the same time, connect remote controller 2 (SUB) to the indoor unit which is at the end of the crossover wiring (P_1, P_2). (See the figure below.)
- Group control is not possible between ceiling suspended cassette type units and normal VRV indoor units.



8-4 CENTRALIZED CONTROL

- For centralized control, it is necessary to designate the group No. For details, refer to the manual of each optional controllers for centralized control.

9. INSTALLATION OF CORNER COVER AND AIR INTAKE GRILLE

- Attach the corner covers to the unit and lock in place by screw. (The screws are taped to the corner covers.)
- For upward or rightward running pipes, cut the corner covers as shown at Fig. 36 before attaching them.
(Refer to Fig. 36)

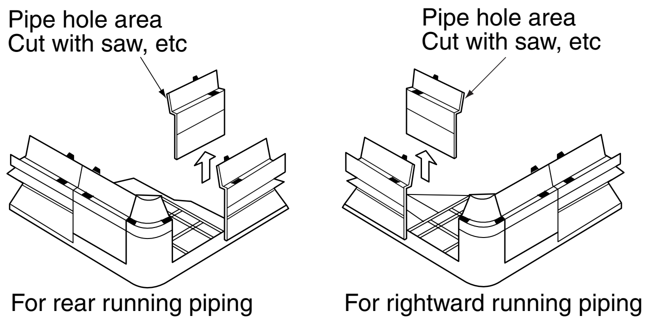


Fig. 36

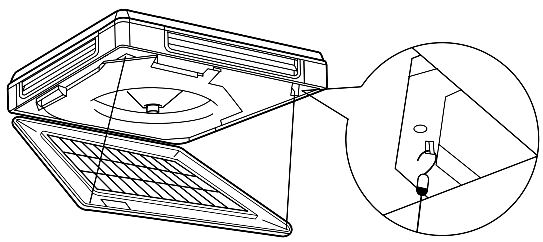


Fig. 37

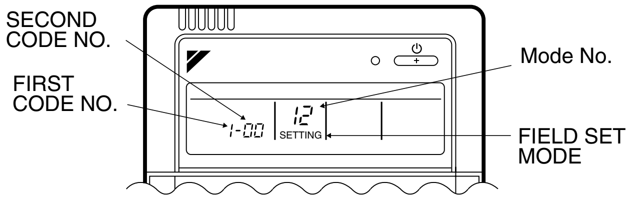
- Attach the air intake grille.
- Hook the strings to the unit to prevent the grille from dropping. **(Refer to Fig. 37)**

10. FIELD SETTINGS

10-1 Make sure the control box lids are closed on the indoor and BEV and outdoor units.

Field setting must be made from the remote controller in accordance with the installation condition.

- Setting can be made by changing the “Mode No.”, “FIRST CODE NO.”, and “SECOND CODE NO.”.
- The “Field Settings” included with the remote control lists the order of the settings and method of operation.
  Setting is made in all units in a group. To set for individual indoor units or to check the setting, use the mode Nos. (with “2” in upper digit) in parentheses ( ).



- Set the remote controller to the field set mode. For details, refer to the “HOW TO SET IN THE FIELD”, in the remote controller manual.

10-2 Setting ceiling height

- Select the SECOND CODE NO. that corresponds to the ceiling height. Refer to Table 5 and 6.
  (SECOND CODE NO. is set to “01” when the unit is shipped from the factory for ceilings 2.7m or lower in 4-way air discharge mode.)

Table 5

Ceiling height (m)			Setting
4-way air discharge	3-way air discharge	2-way air discharge	
Less than 2.7m	Less than 3m	Less than 3.5m	N
More than 2.7m; 3m or less	More than 3m; 3.5m or less	More than 3.5m; 3.8m or less	H
More than 3m; 3.5m or less	More than 3.5m; 3.8m or less	—	S

Table 6

Setting	Mode No.	FIRST CODE NO.	SECOND CODE NO.
N	13 (23)	0	01
H			02
S			03

10-3 Setting for option

- For setting for option, see the installation instructions provided with the option.

10-4 Setting air discharge direction

- For changing air discharge direction to 2-way or 3-way air discharge, change the SECOND CODE NO. as shown Table 7.
  (SECOND CODE NO. is factory set to “01” for a air discharge direction of 4-way air discharge.)

Table 7

Setting	Mode No.	FIRST CODE NO.	SECOND CODE NO.
4-way air discharge	13 (23)	1	01
3-way air discharge			02
2-way air discharge			03

10-5 Setting air filter sign

- Remote controllers are equiped with liquid crystal display air filer signs to display the time to clean air filters.
- Change the SECOND CODE NO. according to Table 8 depending on the amount of dirt or dust in the room.
  (SECOND CODE NO. is factory set to “01” for filter contamination-light)

Table 8

Setting	Spacing time of display air filter sign (long life type)	Mode No.	FIRST CODE NO.	SECOND CODE NO.
Air filter contamination -light	Approx. 2500 hrs	10 (20)	0	01
Air filter contamination -heavy	Approx. 1250 hrs			02

11. TEST OPERATION

Refer to the installation manual of the outdoor unit.

- The operation lamp of the remote controller will flash when a malfunction occurs. Check the malfunction code on the liquid crystal display to identify the point of trouble. An explanation of malfunction codes and the corresponding trouble is provided in “CAUTION FOR SERVICING” of the outdoor unit.
  If any of the items in Table 9 are displayed, there may be a problem with the wiring or power, so check the wiring again.

Table 9

Remote control display	Content
“U3” is lit up	• The test-run has not been completed.
“U4” is lit up “UH” is lit up	• The power on the outdoor unit is off. • The outdoor unit has not been wired for power supply. • The transmission wiring between the outdoor unit and the BEV unit has been cut.
“UF” is lit up	• The wiring with the BEV is incorrect.
No display	• The power on the BEV unit is off. • The BEV unit has not been wired for power supply. • Incorrect wiring for the remote controller wiring, and/or the transmission wiring. • The remote controller wiring is cut. • The wiring with the BEV is incorrect.

⚠ CAUTION

If all interior work has not been completed when the test-run is done, tell the customer not to run the unit until all interior work has been completed, in order to protect the indoor unit. If the unit is run, the indoor unit will be contaminated by substances given off by the paints, adhesives, and other materials used in the interior work, causing sparks and leaking.